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of satellite III. Satellites I. and III. suspected 14 and 3 seconds earlier than the respective recorded times. Full Moon.

Sept. 15, 26.—Images steady and well defined.

Sept. 28.—Bad definition.

Sept. 29.—Clear, with bad definition.

Oct. 1.—Definition pretty good, but sky slightly hazy. Full brightness very unsatisfactory.

It may be added that no occulting-bar has ever been employed in the eclipse observations made at this observatory from 1866 to the present time, and that the times given in the first and seventh columns of the accompanying table are the Windsor mean times of observation diminished by $10^{h}\ 3^{m}\ 20^{s}\cdot 8$, and entered to the nearest second.

Windsor, N. S. Wales:
1889, *January* 8.

Request to Observers of Occultations. By John Tatlock, Jun.

(*Communicated by the Secretaries.*)

I should be obliged if those astronomers who secured observations of the occultation of α *Tauri* by the Moon, between the dates of 1884, September 10, and 1888, March 18, inclusive, will kindly send me copies of the records of such observations, together with full particulars essential to their reduction.

Care of North River Safe Deposit Company,
187 *Greenwich Street, New York.*

Report of the Work of the Melbourne Observatory during 1888.

By R. L. J. Ellery, F.R.S.

During the year ending January 1, 1889, the meridian work with the transit-circle has been continued without interruption, and has included, besides the usual observations of the fundamental clock stars and close circumpolar stars, stars of the *Berliner Jahrbuch* which culminate sufficiently high to be well seen at Melbourne, stars to which the places of comets and small planets have been referred, and a list of stars selected by Dr. Gill for the reduction of his heliometer observations, as well as observations of *Iris* at opposition and a list of comparison stars; also to assist Dr. Gill. The number of R.A. observations was 3,154, and those for polar distance 1,571.

Very little work has been done during the year with the great reflector, on account of increasing tarnish of the mirrors, only 170 revisions of Herschel's nebulæ having been secured. Sixteen new nebulæ were catalogued, and three of Herschel's could not be found.

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In June the telescope was dismantled and preparation made for repolishing the mirrors, involving a large amount of experimental work. One of the 4-foot mirrors was partially repolished in October, when it was found necessary to alter the arrangements of the machinery in order to facilitate testing the mirror-surfaces during the process of figuring and polishing. These alterations were not completed till midsummer, when the weather became too warm to continue the polishing with any prospect of success. Further work in this direction has therefore been deferred till after February.

Observations of Sawerthal's Comet (*a* 1888), of *Sappho* in April, and search for *Eucrate* in July and August were included in the extra-meridional work of the year.

Sun-pictures with the photoheliograph were obtained on 148 days only, as a considerable time was occupied in the alteration of the secondary magnifier to get rid of images of dust particles on the surface of the front lens which detrimentally disfigured the photographs.

The work in meteorology and terrestrial magnetism was continued as usual, including monthly determinations of the absolute elements of terrestrial magnetism and a continuous photographic register of variations.

The daily *Isobaric Chart of Australia and New Zealand* was issued regularly, as in former years.

A Meteorological Conference of the Directors of Australasian Observatories was held at the Melbourne Observatory in September, with the view of improving intercolonial meteorology, the following representatives attending:—H. C. Russell, B.A., F.R.S. (New South Wales); C. Todd, M.A., C.M.G. (South Australia); Hon. John Forrest, C.M.G. (Western Australia); Clement L. Wragge, F.R.G.S., F.R. Met. Soc. (Queensland); Capt. Shortt, R.N. (Tasmania); Sir James Hector, M.D., K.C.M.G. (New Zealand); Col. R. L. J. Ellery, F.R.S., F.R.A.S. (Victoria).

With the exception of the usual meteorological periodicals, no publications have been issued during the year. But the second *General Star Catalogue* and yearly *Catalogue of Separate Results of Transit Circle Observations for* 1880–85, to form vol. vii., will shortly appear.

A Seth Thomas precision clock was obtained in June last. Its performance so far has been very satisfactory.

Preparations are in progress for the erection of the photographic telescope now being constructed by Sir Howard Grubb for star-charting. The instrument will be similar to those being made by the same maker for Greenwich, Cape of Good Hope, Mexico, &c.

[The above Report arrived too late for insertion in the Annual Report of the Council.]

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